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EXAMINER

KAHELIN, MICHAEL WILLIAM

ART UNIT

PAPER NUMBER

3762

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 3/24/2009 have been fully considered but they are not persuasive. Applicant argued that Rezai (US 2005/0065574) and Ideker (US 5,522,854) fail to disclose increasing the sympathetic activity/parasympathetic activity ratio in a manner effective to treat a female subject for a fertility condition because Rezai teaches only that the hypothalamus in general is stimulated, not the specific area of the hypothalamus that induces activation of the sympathetic system, as evidenced by Maillard (US 4,339,384, col. 8, lines 33-36; the "posterior hypothalamus"). However, Rezai discloses in Table V that the posterior nucleus is one of the target sites. Although Rezai does also disclose stimulation of other areas, this does not obviate the fact that the specific target site that induces activation of the sympathetic system (see Maillard) is disclosed by Rezai. Applicant further argued that the Examiner's reliance on Ideker (US 5,522,845) for the teaching of determining a sympathetic/parasympathetic ratio and increasing the sympathetic/parasympathetic is misplaced because Ideker measures heart beat variability, the stimulated nerve is an afferent nerve to the heart or central nervous system, and Ideker provides no disclosure of treating fertility. However, Ideker is not relied upon for the teaching of increasing the ratio because Rezai inherently does this, as detailed above. Ideker is relied upon merely for the teaching of determining sympathetic/parasympathetic balance as a particular type of "neuronal electrical activity...by afferent and efferent pathways that project to and from or communicate with the target site" (Rezai, par. 0048). Applicant further argued that Rezai discloses simple

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measurements of neuronal activity, not a ratio. However, Rezai is not relied upon for this teaching. Ideker is cited as an example of using this particular type of neuronal electrical activity for closed-loop control of autonomic-nervous system-related stimulation. Rezai further teach that fertility and arrhythmia conditions share a common pathway (par. 0002) that would suggest to an artisan of ordinary skill to consult the prior art of both fields for "neuronal electrical activity" indicators. Applicant further argued that Bothe Loncar's disclosure of stimulating "throughout the menstrual cycle" fails to teach the limitation of modulating for a period of days or weeks. However, the human menstrual cycle is approximately one month, and Bothe Loncar clearly discloses that stimulation occurs "throughout" this period.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL KAHRELIN whose telephone number is (571)272-8688. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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